

APPENDIX C—EXAMPLES OF EXISTING AND POTENTIAL FUTURE TRADING PROGRAMS

Examples of Existing and Potential Future Trading Programs

Table 1. Existing Programs.

Program/Location What's Being Traded Trade Type(s)	How Is It Set Up?	Who's Involved?	Status
Arkansas Nature Conservancy, AK wetlands nonpoint/nonpoint	U.S. Army Corps of Engineers (USACE) permittees pay compensatory mitigation fees to The Nature Conservancy. The Conservancy applies these fees to wetland acquisition and enhancement projects. A mitigation ratio is based on types of wetlands.	USACE, Little Rock District (501-324-5296); Arkansas Nature Conservancy (501-663-6699).	At least 6 trades had occurred as of 3/93.
Boulder Creek, CO ammonia, nutrients point/nonpoint	The City of Boulder contributed to a riparian enhancement project (including riparian zone restoration and restoration of instream habitats) to alleviate an un-ionized ammonia problem and defer expensive modifications at its POTW. Studies had shown that POTW upgrades alone would be insufficient to reach water quality standards due to the degraded condition of the creek. See TMDL Case Study #8 (EPA-841-F-93-006; fax requests for document to NCEPI, 513-569-7186).	Denver Regional Council of Governments (303-455-1000); EPA Region 8 (Bruce Zander 303-312-6846). Also the City of Boulder and the Colorado Dept. of Health.	Short-term results look promising; monitoring is in place to assess long-term effects.
Cherry Creek, CO phosphorus point/nonpoint	Point sources can earn wasteload allocation credits by installing, operating, maintaining, and monitoring nonpoint source phosphorus controls. Before trading may begin, urban nonpoint source loadings must be reduced by half.	Denver Regional Council of Governments (303-455-1000); EPA Region 8 (Bruce Zander 303-312-6846). Also the Colorado Water Quality Control Commission.	Implementation of the program has been delayed because nonpoint source loadings are not yet halved and loadings are still below the maximum limit.
Dade County, FL wetlands nonpoint/nonpoint	Clean Water Act section 404 permittees impacting wetlands in specific areas have the option to pay a fee to satisfy mitigation requirements. Funds go into a Wetlands Mitigation Trust Fund that supports improvements in the East Everglades.	USACE, Jacksonville District (904-232-3943); Dade County (305-372-6789). Also the Florida Department of Environmental Resource Management, and Everglades National Park.	As of 3/93, the fund had received over \$400,000.
Fox River, WI BOD, nutrients point/point	Point sources were allowed to trade effluent allocations, but only under limited circumstances: the facility buying reductions must be new, expanding, or not able to meet discharge limits even with use of required technology. Trades where cost-savings is the sole objective are prohibited. Trades are effective for a minimum of one year, and a maximum of the time left on the permit.	Wisconsin Department of Natural Resources (608-266-2621).	The program was first implemented in 1981, but only one trade has occurred since that time.

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Laguna de Santa Rosa, CA nutrients point/nonpoint	The City of Santa Rosa ships treated wastewater to area dairies and farms for application to pasture and some food crops. The city initially paid dairies to take the water; no payments are currently made due to the desirability of the water for the farms. This allows the city to avoid discharging during summer months and is also beneficial to the dairies.	EPA Region 9 (Dave Smith 415-744-2012). Also the City of Santa Rosa, local dairies and farms, North Coast Regional Water Quality Control Board.	The city has upgraded to tertiary treatment, and a TMDL was completed for Laguna de Santa Rosa in 1994. Wastewater transfers continue and are recognized in the city's NPDES permit, but these transactions are not recognized as "formal" trades.
Lake Dillon, CO phosphorus point/nonpoint, nonpoint/nonpoint	At Lake Dillon (previously known as Dillon Reservoir), Colorado, the four wastewater treatment plants discharging to the lake can receive credit for phosphorus load reductions by purchasing nonpoint source reductions. Currently, nonpoint/nonpoint trades are the main focus of the program	Northwest Colorado Council of Governments (970-468-0295); EPA Region 8 (Bruce Zander 303-312-6846). Also the Denver Water Board.	Program began operation in 1984. Improvements in plant treatment efficiencies and slower-than-anticipated growth resulted in few point/nonpoint source trades.
Maryland Nontidal Wetlands Compensation Fund, MD wetlands nonpoint/nonpoint	The Maryland Department of Natural Resources (MD DNR) accepts payment in lieu of mitigation under certain circumstances from Clean Water Act section 404 and state permittees. Fees are deposited into a trust fund that pays for larger restoration projects conducted by the Department and its contractors.	MD DNR (410-974-2985/3016)	As of 3/93, the state had completed 15 fee-funded projects and fee deposits reached approximately \$200,000.
Ohio Wetlands Foundation, OH wetlands nonpoint/nonpoint	The Ohio Wetlands Foundation, a private nonprofit organization, provides a mechanism to aggregate Clean Water Act section 404 mitigation requirements and create larger wetlands habitats. Eligible permittees pay fees to the foundation in lieu of on-site or other off-site mitigation. The Foundation administers fees through a trust.	Ohio Wetlands Foundation (614-228-6647); U.S. Army Corps of Engineers, Huntington District (304-529-5487). Also the Ohio Homebuilders Association and Ohio Department of Natural Resources.	As of 3/93, the Foundation had not yet collected any fees but was constructing wetlands ahead of fee receipt.
Pine Flatwoods Wetlands Mitigation Trust, LA wetlands nonpoint/nonpoint	The Louisiana Nature Conservancy (LNC) accepts fees from Clean Water Act section 404 permittees as compensation for unavoidable wetland losses. LNC uses the fees to support off-site preservation and activities for long-term management of degraded pine flatwoods wetlands.	USACE, New Orleans District (504-862-2250); LNC (504-338-1040). Also the Louisiana Departments of Natural Resources and Wildlife and Fisheries, and the US Fish and Wildlife Service.	As of 3/93, LNC had collected over \$100,000 under this program and was about to make its first purchase.

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Providence, RI salt (deicing chemicals) point/nonpoint (drinking water)	The Providence, Rhode Island, Water Department is paying the city's Department of Transportation \$60,000 a year to use alternative deicing chemicals in the supply source recharge area. The alternative chemicals are lower in sodium content than those typically used. As a result, the Water Department is able to meet sodium standards without resorting to additional in-plant treatment.	Providence Department of Transportation (401-421-7740); Providence Water Department (401-521-6300).	Ongoing.
Tar-Pamlico River Basin, NC nitrogen point/point, point/nonpoint	In North Carolina's Tar-Pamlico River Basin, a group of wastewater treatment plants can receive credit for nitrogen loading reductions by paying \$56 per kilogram of desired reduction into an Agricultural Cost Share Fund that supports best management practices in the basin. In comparison, the dischargers estimated that technological upgrades would have provided nitrogen reductions at a cost of between \$250 and \$500 per kilogram. Notably, the point sources are treated as if they were a single point source (the "bubble" approach) for purposes of implementing the trading program. See TMDL Case Study #12 (fax requests for document to NCEPI, 513-569-7186).	Tar-Pamlico Basin Association (919-551-1500); NC Dept. of Environment, Health and Natural Resources (919-733-5083); and the Environmental Defense Fund (919-821-7793).	The program began operating in 1992 and has provided incentive for point sources to increase operations and maintenance efficiency. The ability of point sources to reduce loads below the limit through plant operational improvements resulted in few trades until recently.
Vicksburg District, U.S. Army Corps of Engineers, MS wetlands nonpoint/nonpoint	The Vicksburg District accepts fees from Clean Water Act section 404 permittees in lieu of compensation under certain circumstances. Funds support wetland restoration and enhancement projects. Past fee recipients include Ducks Unlimited, The Nature Conservancy, and other public agencies involved in environmental efforts in Louisiana and Arkansas.	USACE, Vicksburg District (601-631-5276)	As of 3/93, 7 permittees had participated and contributed over \$150,000.